

# Digitalization Roadmap for the Process Industry

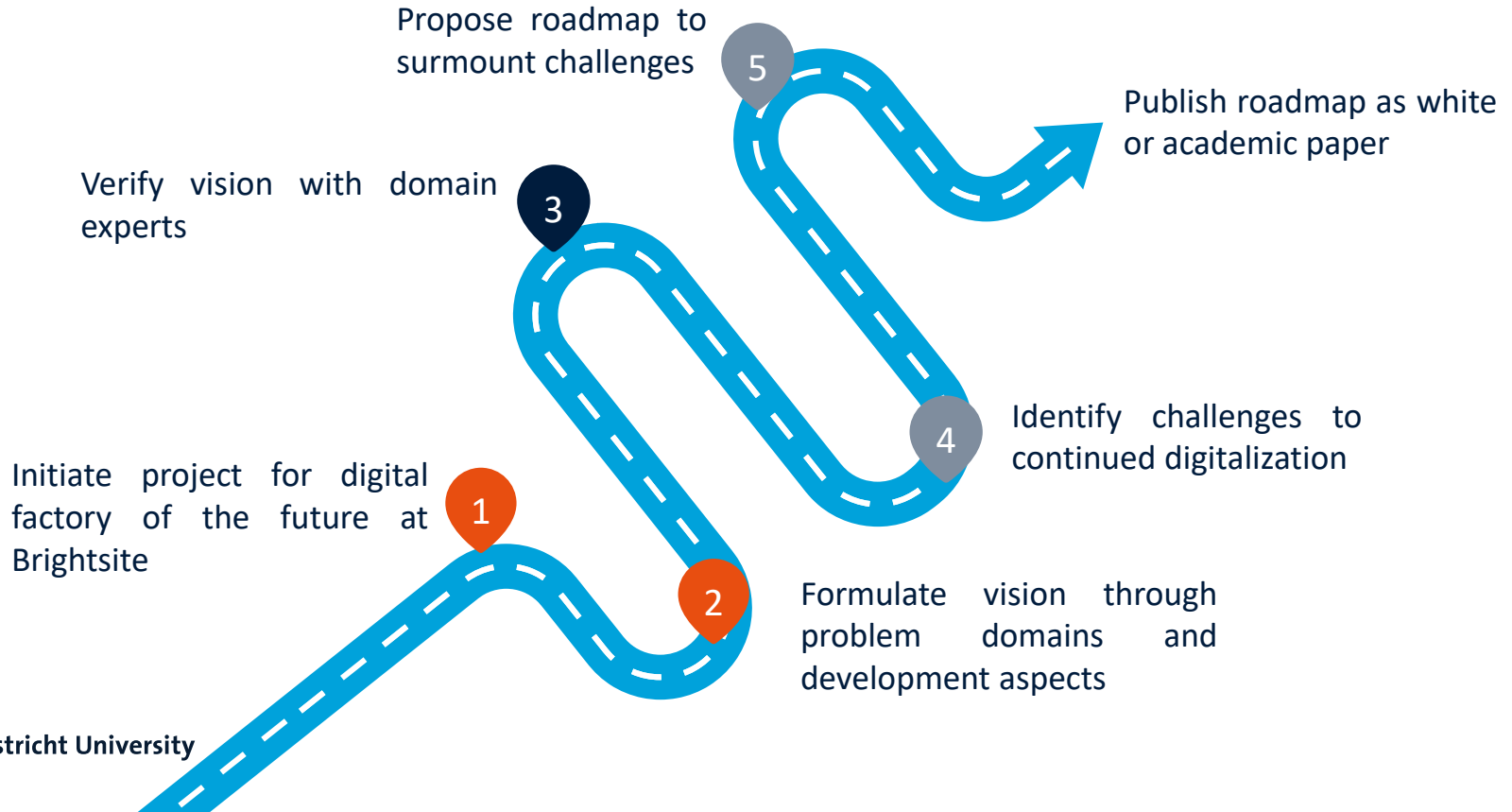
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# Overview

- **Who?**
  - Brightsite collaboration between UM, TNO, Sitech, and Brightlands
- **What?**
  - Developing roadmap for digitalization in process industry
- **Why?**
  - Reach climate goals by 2050 and educate the next generation of scientists, researchers, engineers and coworkers

# Roadmap to the roadmap



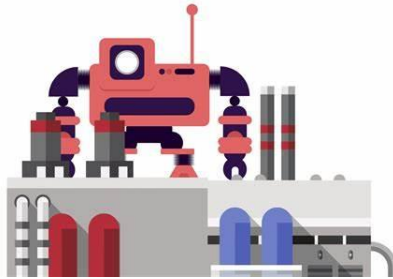
# Problem Domains

Do you  
agree with  
these? Let  
us know!

Maintenance



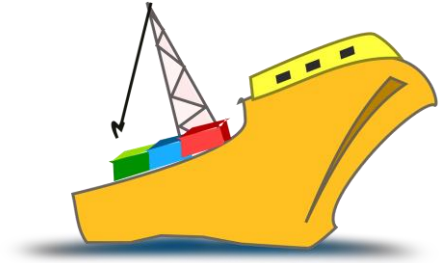
Production



Safety  
Management



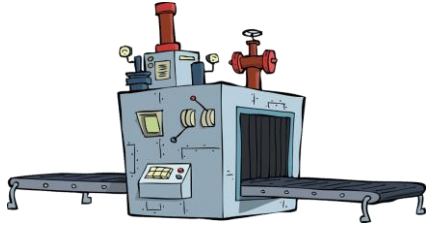
Supply Chain  
Management



# Development Aspects

Do you  
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these? Let  
us know!

Assets



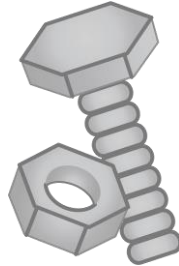
People



Feedstock



Energy



Spare Parts



Site

# Digitalization Matrix

	Maintenance	Production	Safety Management	Supply Chain Management
Assets	✓	✓	✓	
People	✓	✓	✓	✓
Feedstock		✓		✓
Energy		✓		✓
Spare Parts				✓
Site		✓		

# Project Ideas

- **Maintenance**

- Early warning system using sensor data
- Autonomous inspection
- Trans-company information sharing via federated learning

- **Production**

- Digital twin of plants
- Forecasting process conditions
- Control operator smart assistant

# Projects Ideas

- **Safety Management**
  - Virtual reality training
  - Anomaly detecting alarms
  - Sentiment analysis of inspection reports
- **Supply Chain Management**
  - AI aided prediction of demand
  - Blockchain for material certification
  - 3D printing of spare parts



# We want to hear from you!

Ask us about how you can help out in  
the digitalization transformation

